

**ROCKY FLATS PLANT  
EMD OPERATING  
PROCEDURES MANUAL  
VOLUME III: GEOTECHNICAL**

**Manual No.: 5-21000-OPS-GT  
Procedure No.: Table of Contents, Rev 51  
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Effective Date: 01/25/94  
Organization: Environmental Management**

**THIS IS ONE VOLUME OF A SIX VOLUME SET  
WHICH INCLUDES:**

**VOLUME I: FIELD OPERATIONS (FO)  
VOLUME II: GROUNDWATER (GW)  
VOLUME III: GEOTECHNICAL (GT)  
VOLUME IV: SURFACE WATER (SW)  
VOLUME V: ECOLOGY (EE)  
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**EG&G  
SUPERSEDED  
DOCUMENT**

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93-DMR-000955	Form GT.2A Modification	2	01/10/94
93-DMR-000960	QC Sample Collection Modification	2	01/10/94

**DOCUMENT CLASSIFICATION REVIEW WAIVER  
PER R.B. HOFFMAN, CLASSIFICATION OFFICE  
JUNE 11, 1991**

ADMINISTRATIVE

A-SW-001059

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DCN 92.03	EXPIRED	2	EXPIRED
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DCN 92.01	INCORPORATED	2	01/10/94
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GT.06	Monitoring Wells and Piezometer Installation	2	05/12/92
DCN 92.05	EXPIRED	2	EXPIRED
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DCN 93.02	Well Point Installation	2	01/28/93
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DCN 93.11	SVE Well Specifications	2	08/20/93
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DCN 93.13	Cancel DCN 93.11, Item #1 for OU 2 SVE Study	2	10/06/93
DCN 93.14	Revision of Figure GT.6-3	2	10/06/93
GT.07	Logging and Sampling of Test Pits and Trenches	2	05/12/92

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• GT.08	Surface Soil Sampling	3	01/25/94
GT.09	Soil Gas Sampling and Field Analysis	2	05/12/92
GT.10	Borehole Clearing	2	05/12/92
GT.11	Plugging and Abandonment of Wells	2	05/12/92
93-DMR-000962	Form GT.11A Modification	2	01/10/94
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DCN 93.01	Land Surveying Clarification	2	09/02/93
GT.18	Surface Geophysical Surveys	2	05/12/92
DCN 92.01	Surface Magnetic Surveys Procedure	2	EXPIRED
DCN 92.02	Modification to Stacking Requirements	2	EXPIRED
DCN 92.03	Modification to Method of Taking Readings	2	EXPIRED
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DCN 93.02	5.5 Time Domain Electromagnetic Metal Detection	2	11/22/93
GT.19	Field Gas Chromatographs	2	05/12/92
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GT.21	Cone Penetrometer Testing	1	05/12/92
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<b><u>Procedure No.</u></b>	<b><u>Title</u></b>	<b><u>Rev. No.</u></b>	<b><u>Effective Date</u></b>
GT.24	Approval Process for Construction Activities on or Near Individual Hazardous Substance Sites (IHSSs)	0	05/12/92

## DOCUMENT MODIFICATION REQUEST (DMR)

Page 1 of 2

Refer to 1-A01-PPG-001 for Processing Instructions.  
Print or Type All Information (Except Signatures)

1. Date 01/25/94			25. DMR. No. 94-DMR-000133 <i>3020</i>		
2. Existing Document Number/Revision 4-E42-ER-OPS-GT.08, Rev. 3			3. New Document Number or Document Number if it is to be changed with this Revision N/A		
4. Originator's Name/Phone/Page/Location <i>RR 01/26/94</i> Bill Fieselman Gregg Anderson/8504/NA/080			5. Document Title Surface Soil Sampling		
6. Document Type <input checked="" type="checkbox"/> Procedure <input type="checkbox"/> Other		7. Document Modification Type (Check only one) <input type="checkbox"/> New <input type="checkbox"/> Revision <input checked="" type="checkbox"/> Intent Change <input type="checkbox"/> Nonintent Change <input type="checkbox"/> Editorial Correction <input type="checkbox"/> Cancellation			
8. Item	9. Page	10. Step	11. Proposed Modifications		
1	6	Sec. 4.0	<p>Note: The Scope Limitation for this DMR is OUs 8, 9, 10, 12, 13, 14 (Industrial Area OUs) for unpaved radiological and non-radiological surface soil sampling.</p> <p>Replace third sentence with: "A visual description will be performed on each soil sample as they are being collected, using U.S.C.S. and Munsell reference charts to aid in the visual description. The following characteristics will be documented in the field log book and on the Surface Soil Sampling Field Activities Report:</p> <ul style="list-style-type: none"> <li>• Predominant type of material (i.e., gravel, sand, silt, clay, etc.)</li> <li>• Grain size (based on U.S.C.S. grain size divisions)</li> <li>• Color (based on Munsell Rock-Color chart)</li> <li>• Grading (based on U.S.C.S. classification)</li> <li>• Angularity (very angular through well rounded)</li> <li>• Moisture content (dry, moist, saturated)</li> <li>• Organic content (i.e., abundant roots, peat, etc.)"</li> </ul>		
2	9	Sec. 4.2.1	<p>Change first sentence to read: "The purpose of the sampling is to determine the amount of accumulated plutonium that has been deposited on the ground, and if nonradionuclide contaminants have been deposited on the ground."</p> <p style="text-align: right;">DOCUMENT CLASSIFICATION REVIEW WAIVER PER R.B. HOFFMAN, CLASSIFICATION OFFICE JUNE 11, 1991</p>		
12. Justification (Reason for Modification, EJO#, TP#, etc.)					
<p>Item No.s 1,3,4,5,6,7,8 - DOE has required that all surface soil sampling employ the RF Method, and CDH has recommended collecting 5 subsamples with the RF Method rather than 10 subsamples. Reference Letter: G.W. Baughman, CDH to F. Lockhart, U.S. DOE, RE: Soil Sampling Methodology for Industrialized Area OUs, September 1, 1992.</p> <p>Item No. 2 - Due to the large number of samples to be collected, the extensive classification procedure required by GT.1, and the similarity of surface soils in the Industrial Area, classifying each sample via GT.1 would be extremely repetitive and manhour intensive.</p> <p>If modification is for a new procedure or a revision, list concurring disciplines in Block 13, and enter N/A in Blocks 14 and 15. If modification is for any type of change or a cancellation, organizations are listed in Block 13, then Concurror prints, and signs in Block 14, and dates in Block 15.</p>					
13. Organization		14. Print and Sign (if applicable)		15. Date (if applicable)	
RPM		Bruce Peterman		01/28/94	
EOM		Maria Broussard		01/26/94	
RE		Dick Norton		1/28/94	
IH		Lisa Nelowet		1/28/94	
EQS		Mark Brooks		1/28/94	
SME/FSE		M.Z. Litaor		01/26/94	
16. Originator's Supervisor (print/sign/date) Gregg Anderson/8504/080 <i>01/26/94</i>					
17. Assigned SME/Phone/Page/Location M.Z. Litaor/8583/NA/080		18. Cost Center 202		19. Charge Number ENV-GT	
20. Requested Completion Date 01/31/94		21. Effective Date 01/28/94		02/04/94 <i>MCS</i>	
22. Accelerated Review? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		23. ORC Review ORC Review Not Required			
24. Responsible Manager (print, sign, date) B.D. Peterman <i>01/28/94</i>					

REVIEWED FOR CLASSIFICATION/UCNI  
BY NA

JAN 31 1994  
14:00:00  
JAN 28 1994  
15:00:00

Refer to 1-A01-PPG-001 for Processing Instructions.

Print or Type All Information (Except Signatures)

25.

DMR. No. 94-DMR-000133 <sup>3020</sup>

2. or 3. Document Number/Revision

4-E42-ER-OPS-GT.08, Rev. 3

3. Document Title

Surface Soil Sampling

8. Item	9. Page	10. Step	11. Proposed Modifications
3	9	4.2.1	Substitute "Five" for "Ten" in the last sentence.
4	11	4.2.4	Substitute "Five for "Ten" in the first sentence.
5	11	4.2.4	Change second sentence to read: "Samples should be collected at the center and corners of one, 1-meter square template, centered on the selected sample site."
6	12	4.2.4, Step 4	Change to: "For radiological samples, remove soil samples from the jig interior with scoop/trowel and place it in a 10-mesh metal sieve that has a plastic bag attached to the bottom to receive the soil that passes through the sieve. For nonradiological samples, remove soil samples from the jig interior with scoop/trowel and place it in a 10-mesh stainless steel sieve which is placed in a stainless steel pan. After all 5 samples (5 samples from the one 1-meter square templates) have been placed into the sieve, attach the sieve cover and seal with tape. Sieving may be done in stages if all 5 soil samples cannot be placed into the sieve at the same time."
7	12	4.2.4, Step 6	Replace the 4th through 7th sentences with: "Mix each quarter thoroughly with a scoop/trowel. Roll the quarters back together and smooth to a uniform thickness in the stainless-steel pan. Collect adequate sample volume in appropriate laboratory designated sample container(s) with stainless steel scoop/trowel by making an "S" motion through the composited soil."
8	13	4.2.4	Replace with: "Place residual sieved soil from quartering and sampling back into original disturbed area."
9	13	4.2.4	Delete Step 8.
10	38	Fig. GT.8- 3	Replace Figure GT.8-3.

12. Justification (Reason for Modification, EJO#, TP#, etc.)

Item No. 9 - Long-term storage (greater than 90 days) of potentially contaminated soil could present several regulatory issues. The need for additional sample at a later date would be better served by returning to the sample location and collecting another sample.